

Claims

1. Method for the removal of particulate matter from aqueous suspension comprising steps of

5 establishing value of pH and of Zeta potential of particles in the suspension;

providing a porous ceramic filter having a membrane layer consisting of at least a metal-oxide with a Zeta potential at the pH value of the suspension having same polarity of the Zeta potential as the particles in the suspension;

passing the suspension through the porous filter; and withdrawing a filtrate.

2. Method according to claim 1, wherein the metal-oxide is selected according to the following Table:

| pH of the aqueous suspension | Zeta potential of particles with positive polarity | Zeta potential of particles with negative polarity |
|------------------------------|--|--|
| 3-4 | TiO ₂ (anatase) | TiO ₂ (rutil), WO ₃ |
| 4-5 | TiO ₂ (anatase), ZrO ₂ , Al ₂ O ₃ | TiO ₂ (rutil), WO ₃ , SiO ₂ |
| 5-6 | ZrO ₂ , Al ₂ O ₃ , MgAl ₂ O ₄ | TiO ₂ (rutil), WO ₃ |
| 6-7 | ZrO ₂ , Al ₂ O ₃ , MgAl ₂ O ₄ | TiO ₂ (anatase) |
| 7-8 | ZrO ₂ , MgAl ₂ O ₄ | TiO ₂ (anatase) |
| 8-9 | MgAl ₂ O ₄ | |
| 9-10 | MgAl ₂ O ₄ (400°C) | |

3. Method according to claim 1, wherein the suspension is passed in cross-flow through the filter.

4. Method according to claim 1, wherein the particles comprise yeast cells.

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